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STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION

MONITORING AND REPORTING PROGRAM (No. CI-2043)

FOR

BROWNING-FERRIS INDUSTRIES OF CALIFORNIA, INC.
(SUNSHINE CANYON CITY SIDE LANDFILL)

Browning-Ferris Industries of California, Inc. (BFI, or Discharger) shall begin implementing this revised Monitoring and Reporting Program (M&RP•) at the Sunshine Canyon City Side Landfill (Landfill) beginning on the effective date of Cleanup and Abatement Order (CAO) No. R4-2003-0132.

I. REQUIRED REPORTS AND CONTINGENCY RESPONSE

BFI shall submit the following reports to this Regional Board in accordance with the schedules specified. Semi-annual and Annual Monitoring Reports shall be submitted in an electronic format, with text, tables, figures, and appendices (in PDF or JPEG format) and laboratory analytical data (in MS Excel or Access format) in an electronic format acceptable to the Regional Board. Accompanying the electronic version of the report shall be a hard copy of a transmittal letter, with perjury statement and signatures of the preparers and submitters, and a hard copy of the report without the appendices.

A. SEMI-ANNUAL MONITORING REPORT

A written Monitoring Report shall be submitted semi-annually by February 15 (for the period from July 1 to December 31) and August 15 (for the period from January 1 to June 30) of each year. Semi-annual Reports shall include, but should not be limited to, the following:

1. **Transmittal Letter:** A letter transmitting the essential points shall accompany each report. Such a letter shall include a discussion of any violations found since the last such report was submitted, and shall describe actions taken or planned for correcting those violations. If the Discharger has previously submitted a detailed time schedule for correcting said violations, a reference to the correspondence transmitting such schedule will be satisfactory. If no violations have occurred since the last submittal, this shall be stated in the transmittal letter. Monitoring reports and the letter transmitting the monitoring reports shall be signed by a principal executive officer at the level of vice president or above, or by his/her duly authorized representative, if such a representative is responsible for the overall operation of the facility from which the discharge originates. The letter shall contain a statement by the official, under penalty of perjury, that to the best of the signer's knowledge the report is true, complete, and correct.

2. **Summary of Non-Compliance** – The report shall contain a summary of non-compliance that discusses the compliance record and the corrective actions taken or planned that may be needed to bring the discharge into full compliance with waste discharge requirements. Significant aspects of any on going corrective action measures conducted during the monitoring period shall also be summarized. This section shall be located at the front of the report and shall clearly list all non-compliance with discharge requirements, as well as all exceedances of water quality protection standards.

• Terms and acronym used in this Program are defined in 20164 of 27 CCR.

3. **Site Conditions**: General discussion of site conditions (geology, climate, 100 year 24 hour storm, and watershed specifics, etc.) relative to water quality monitoring.

4. **Narrative Description** – A narrative discussion of the various monitoring activities and results. Each requirement of Part II of this M&RP shall be specifically discussed.

5. **Laboratory Results:** Laboratory results and statements demonstrating compliance with Part II of this M&RP. Results of additional water sampling and analyses performed at the Landfill, outside of the requirements of this M&RP, shall be summarized and reported. If the results of such additional sampling and analyses have or will be reported under separate cover, a statement as such shall be included in the monitoring report.

6. **Standard Observations:** A summary and certification of completion of all Standard Observations for the Landfill property in accordance with NPDES monitoring and reporting requirements. The records of observation are to be included with the semi-annual report due August 15th.

7. **Extracted Groundwater and Leachate:** A summary of the total volume, on a monthly basis, of groundwater extracted at the extraction trench and any other locations at the site, and how this water is handled. If there is any landfill leachate and gas condensate that has been extracted from the landfill, the volume and disposal method of these liquids shall also be reported.

8. **Map(s):** Map(s) or aerial photograph(s) showing monitoring locations, relative physical features, and groundwater contours to the greatest degree of accuracy possible.

B. ANNUAL SUMMARY REPORT

BFI shall submit an annual summary report to the Board covering the previous monitoring year. The annual monitoring period ends December 31. This report may be combined with the second semi-annual report of the year and shall be submitted no later than February 15 of each year. The annual summary report shall include at least the following:

1. **Discussion:** Include a comprehensive discussion of the compliance record, any significant monitoring system and operational changes, a summary of corrective action results and milestones, and a review of construction projects, with water quality significance, completed or commenced in the past year or planned for the up-coming year.

2. **Graphical Presentation of Analytical Data:** For each Monitoring Point, submit in graphical format the laboratory analytical data for all samples taken within at least the previous eight calendar years. Each such graph shall plot the concentration of one or more constituents over time for a given Monitoring Point, at a scale appropriate to show trends or variations in water quality. Maximum contaminant levels (MCL) shall be graphed along with constituent concentrations where applicable. Graphs shall plot each datum, rather than plotting mean values. For any given constituent or parameter, the scale for background plots shall be the same as that used to plot downgradient data.

3. **Analytical Data:** All monitoring analytical data obtained during the previous year, presented in tabular form. Additionally, complete data histories of each well shall be submitted in an electronic format acceptable to the Regional Board.

4. **Map(s):** Map(s) showing the areas where any significant events have taken place during the previous calendar year.

C. CONTINGENCY RESPONSE

1. **Leachate Seep:** BFI shall, within 24 hours of discovery, report to the Board by telephone any previously unreported seepage from the Landfill. A written report shall be filed with the Board within seven days, containing at least the following information:

   a. Map - A map showing the location(s) of seepage.

   b. Flow rate - An estimate of the flow rate.

   c. Description - A description of the nature of the discharge (e.g., all pertinent observations and analyses).

   d. Location - Location of sample(s) collected for laboratory analysis, as appropriate.

   e. Corrective measures - approved (or proposed for consideration) by the Executive Officer.

2. **Response to an Initial Indication of a Release:** Should the initial statistical or non-statistical comparison indicate that a release is tentatively identified, BFI shall:

   a. Within 24 hours, verbally notify the designated Board staff contact as to the Monitoring Point(s) and constituent(s) or parameter(s) involved;

   b. Provide written notification by certified mail within seven days of such determination; and

   c. Do either of the following:

      i. Carry out a discrete re-test in accordance with Section II.B.9.b. of this M&RP. If the re-test confirms the existence of a release or BFI fails to perform the re-test, BFI shall carry out the release discovery response requirements in Section I.C.4. In any case, the Discharger shall inform the Board of the re-test outcome within 24 hours of results becoming available, following up with written results submitted by certified mail within seven days, or

      ii. Make a determination, in accordance with 27 CCR section 20420(k)(7), that a source other than the waste management unit caused the release or that the evidence is an artifact caused by an error in sampling, analysis, or statistical evaluation or by natural variation in the groundwater, surface water, or the unsaturated zone.

3. **Physical Evidence of a Release:** If either BFI or the Executive Officer determines that there is significant physical evidence of a release (27 CCR, section 20385(a)(3)), BFI shall conclude that a release has been discovered and shall:

   a. Within seven days notify the Board of this fact by certified mail (or acknowledge the Board's determination).

   b. Carry out the requirements of Section I.C.4. for all potentially-affected monitored media.

c. Carry out any additional investigations stipulated in writing by the Executive Officer for the purpose of identifying the cause of the indication.

4. **Release Discovery Response:** If either BFI or the Executive Officer concludes that a release has been discovered, the following steps shall be carried out:

   a. If this conclusion is not based upon monitoring for all constituents of concern (COCs), BFI shall sample for all COCs at all Monitoring Points in the affected medium. Within seven days of receiving the laboratory analytical results, BFI shall notify the Executive Officer, by certified mail, of the concentration of all COCs at each Monitoring Point. This notification shall include a synopsis showing, for each Monitoring Point, those constituents that exhibit an unusually high concentration.

   b. BFI shall, within 90 days of discovering the release, submit an Amended Report of Waste Discharge (AROWD) proposing an Evaluation Monitoring and Reporting Program (EMP) that:

      i. Meets the requirements of 27 CCR sections 20420 and 20425.

      ii. Satisfies the requirements of 40 CFR 258.55(g)(I)(ii) by committing to install at least one monitoring well at the facility boundary directly down-gradient of the center of the release.

   c. BFI shall, within 180 days of discovering the release, submit a preliminary engineering feasibility study (EFS) meeting the requirements of 27 CCR, section 20430.

   d. BFI shall immediately begin delineating the nature and extent of the release by installing and monitoring assessment wells as necessary to assure that it can meet the requirements of 27 CCR, section 20425, to submit a delineation report within 90 days of when the Executive Officer directs BFI to begin the EMP.

   e. The EMP for the discovered release may be incorporated into any existing EMP or corrective action program (CAP) that is implemented at the Landfill.

5. **Release Beyond Facility Boundary:** Any time BFI concludes (or the Executive Officer directs BFI to conclude) that a release from the Landfill has proceeded beyond the facility boundary, BFI shall so notify all persons who either own or reside upon the land that directly overlies any part of the plume (Affected Persons) as follows:

   a. Initial notification to Affected Persons shall be accomplished within 14 days of making this conclusion and shall include a description of BFI's current knowledge of the nature and extent of the release.

   b. Subsequent to initial notification, BFI shall provide updates to all Affected Persons, including any persons newly affected by a change in the boundary of the release, within 14 days of concluding there has been any material change in the nature or extent of the release.

   c. Each time BFI sends a notification to Affected Persons (under a. or b., above), it shall, within seven days of sending such notification, provide the Board with both a copy of the notification and a current mailing list of Affected Persons.

D. RESPONSE TO VOC DETECTION IN BACKGROUND WELLS

1. Except as indicated in Section I.D.2. below, any time the laboratory analysis of a sample from a Background Monitoring Point shows either (1) two or more VOCs above their respective Method Detection Limit, or (2) one VOC above its respective Practical Quantitation Limit, BFI shall:

   a. Within 24 hours, notify the Board by phone that possible Background Monitoring Point contamination has occurred.

   b. Follow up with written notification by certified mail within seven days.

   c. Shall immediately obtain two new independent VOC samples from that Background Monitoring Point and send them for laboratory analysis of all detected VOCs.

2. If either or both the new samples validate the presence of VOC(s) at the Background Monitoring Point, BFI shall:

   a. Within 24 hours, notify the Board about the VOC(s) verified to be present at that Background Monitoring Point.

   b. Provide written notification to the Board by certified mail within seven days of validation.

   c. Within 180 days of validation, submit a report, acceptable to the Executive Officer, which examines the possibility that the detected VOC(s) originated from other than the Landfill, and proposes appropriate changes to this M&RP.

3. If the Executive Officer determines, after reviewing the report submitted under Section I.D.2. above, that the VOC(s) detected originated from a source other than the Landfill, the Executive Officer will make appropriate changes to this M&RP.

4. If the Executive Officer determines, after reviewing the report submitted under Section I.D.2. above, that the detected VOC(s) most likely originated from the Landfill, BFI shall assume that a release has been detected and shall immediately begin carrying out the requirements of Sections I.C.4 and I.C.5. of this M&RP.

E. SUBMITTING OF REPORTS

1. Each monitoring report shall contain the following statement:

   "I certify under penalty of perjury that I have personally examined and am familiar with the information submitted in this document and all attachments and, based on my inquiry of the those individuals immediately responsible for obtaining the information, I believe the information is true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

2. A duly authorized representative of BFI may sign the documents if:

   a. The authorization is made in writing by the person described above;

   b. The authorization specified an individual or person having responsibility for the overall operation of the regulated disposal system; and

c. The written authorization is submitted to the Executive Officer.

3. All reports required in this M&RP shall be addressed to:

California Regional Water Quality Control Board
Los Angeles Region
320 W. 4th Street, Suite 200
Los Angeles, California 90013
ATTN: Information Technology Unit

II. REQUIRED MONITORING AND INSPECTIONS

BFI shall conduct the following monitoring and inspections at the Landfill. Unless otherwise indicated, all monitoring data and inspection results shall be reported to the Board as outlined in Section I of this M&RP.

A. ENVIRONMENTAL MONITORING NETWORKS

BFI shall conduct analytical monitoring on groundwater, surface water, leachate, and the vadose (unsaturated) zone at the Landfill. The current environmental monitoring points for the Landfill are summarized in Table T-1 and their locations are displayed on Figure T-1. Monitoring wells at the Landfill that are not part of the compliance groundwater monitoring system are on standby status. Unless approved by the Executive Officer for proper decommissioning, all standby wells shall be properly maintained and kept in operation condition.

Table T-1: Monitoring Points at the City Side Landfill

Media Monitored	Monitor Point	Location
Shallow Groundwater Zone	MW-1[1], MW-2A[3], MW5[1], MW-6[2][3], MW-7[1][3]], MW-8[2][3], MW-9[1][3], MW-10[1][3], Extraction Trench[1], MW-13[1]	Down-gradient
	MW-4[3]	Upgradient
Deep Groundwater	MW-2B[3], DW-1[1][3], DW-4[1][3]	Down-gradient
	DW-2, DW-3	Side-gradient
Surface Water	S-A[3], S-B[3]	Down Canyon
	S-C[3], S-D[3]	Up Canyon
Leachate	LR-2[3]	N/A
Unsaturated zone	Subdrain outlets[3] and GP-1[3] through GP-14[3]	N/A

[1] Current quarterly monitoring points
[2] Standby monitoring points
[3] It is anticipated that these monitoring points will be revised as necessary for landfill site development (storm water conveyance and control systems, and access roads) and landfill closure activities. For any monitoring wells that require abandonment, the discharger shall submit a technical report for Regional Board approval. The Technical Report shall provide the rational for removal, replacement, or relocation of the existing monitoring point.

B. ANALYTICAL MONITORING

1. **Initial Full Appendix II Scan –** The most recent full Appendix II constituents scan at the Landfill was performed at most of the groundwater monitoring points at the Landfill in December 2002. Within 30 days of the adoption of this order, all ground water monitoring points where such analyses have not been performed within the last five years must be sampled and analyzed for the presence or absence of all Appendix II constituents that are not yet on the landfill's Monitoring Parameter (MPar) list. Such initial complete Appendix II sampling shall also be performed at any new groundwater monitoring well within 30 days of its installation. For any Appendix II constituent detected in the scan that is not yet on the landfill's MPar list, BFI shall resample for that constituent, within thirty days, at all monitoring points where the constituent(s) was detected. Any Appendix II constituent that is detected and confirmed at one or more ground water monitoring points becomes a new constituent of concern (COC) for the Landfill and shall also be added to the Landfill's MPar list, pursuant to 40CFR 258.55(b-d).

2. **COC List —** As of the date of the adoption of this M&RP, the COC list for the Landfill consists of all those constituents listed in Table T-2 below. In addition, at any subsequent time, the COC list shall include: all Appendix II constituents detected and verified in the initial scan under Sections II.B.1. and all Appendix II constituents that have been detected and affirmed in the leachate scan required by the M&RP. BFI shall notify Regional Board staff of any such new addition to the COC list immediately, via phone, fax, or e-mail, shall note it in the operating record within 14 days of the verification, and shall note prominently the constituent(s) added to the COC list in the next scheduled monitoring report.

3. **Monitoring Parameters (MPars):** Current Groundwater MPars at the Landfill are listed in Table T-2, including:

    a. **Indicator Parameters**, including all Inorganic Indicator Parameters, Appendix I VOCs, methyl tertiary butyl ether (MTBE), and 1,4-dioxane. These constituents are considered capable of providing reliable indication of a release from the Landfill. BFI shall apply the statistical analyses described in Section II.B.8. or nonstatistical analysis in Section II.B.9. of this M&RP to analyze all groundwater monitoring data obtained under this program

    b. **Supplemental Parameters** are inorganic constituents that provide important information regarding groundwater geochemistry but are not expected to show significant variation in groundwater in the event of a landfill release. Monitoring data for the Supplemental Parameters will generally be used for informational purposes only and will not be subjected to routine statistical analysis.

    c. Any other **COCs** that have been detected and confirmed to exist at any groundwater monitoring points at the site.

4. **Ongoing Background Well Testing** - Even though most data analysis will be via Intra-Well comparisons, BFI shall continue to monitor background wells, for each MPar and COC, each time that MPar or COC is monitored at downgradient wells. Water quality data obtained from background wells shall be processed and reported the same way as Detection Monitoring Wells. BFI shall follow the requirements in Section I.D. of this M&RP in response to the detection of any VOCs at any background well at the site.

Table T- 2 Current Constituents of Concern at the City Side Landfill

Monitoring Parameters			Other COCs
Indicator Parameters		**Supplemental Parameters**	
Inorganic Indicator Parameters: Alkalinity, total Ammonia, nitrogen Chemical oxygen demand (COD) Chloride Potassium, total Total dissolved solids (TDS) Total organic carbon (TOC) **VOCs:** 1,1,1,2-Tetrachloroethane 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethene 1,2,3-Trichloropropane 1,2-Dibromo-3-chloropropane 1,2-Dibromoethane 1,2-Dichlorobenzene 1,2-Dichloroethane 1,2-Dichloropropane 1,4-Dichlorobenzene 2-Butanone 2-Hexanone 4-Methyl-2-Pentanone Acetone	Acrylonitrile Benzene Bromochloromethane Bromodichloromethane Bromoform Bromomethane c-1,2-Dichloroethene c-1,3-Dichloropropene Carbon Disulfide Carbon Tetrachloride Chlorobenzene Chloroethane Chloroform Chloromethane Dibromochloromethane Dibromomethane Dichlorodifluoromethane Ethylbenzene Iodomethane Methylene chlorideo-Xylene p/m-Xylene Styrene t-1,2-Dichloroethene t-1,3-Dichloropropene t-1,4-Dichloro-2-Butene Tetrachloroethene Toluene Trichloroethene Trichlorofluoromethane Vinyl Acetate Vinyl Chloride Methyl tertiary butyl ether (MTBE) 1,4-Dioxane	Bicarbonate (as $CaCO_3$) Boron, total Bromide Calcium, total Carbon dioxide, lab Fluoride Iron, total Magnesium, total Manganese, total Nitrate-N pH, field Sodium, total Sulfate Specific conductance, field Temperature, field Turbidity, field	**Organics** 1,3-dichloro-benzene 2,4-dimethyl-phenol Acenaphthene Bis(2-ethylhexyl) phthalate Fluorene Naphthalene Phenanthrene **Metals:** Arsenic Barium Chromium, total Cobalt Copper Lead Nickel Selenium Sulfide Vanadium Zinc

5. **Water Quality Protection Standard (WQPS)** - In accordance with 27 CCR section 20390, WQPS for the City Side Landfill is established as the natural background groundwater quality at the site, which is set to either the statistically predicted value (if the constituent naturally exists) or the laboratory detection limit (if the constituent does not naturally exist in the water). The statistically predicted values, or Concentrations Limits, for certain inorganic well/Mpar pairs that have been calculated based on available water quality data are included in Table T-3.

6. **Development and Updating of Concentration Limits –** BFI shall continue to develop and update Concentration Limits following the procedures provided in Section III.B.8.a. of this M&RP. The first annual report following the adoption of this M&RP shall include an updated list of Concentration Limits for all COCs at all Monitoring Points for which sufficient data exists.

Subsequently, BFI shall review Concentration Limits biannually in its annual reports submitted to the Regional Board. When appropriate, new Concentration Limits shall be proposed. For any well/Mpar pair for which the Intra-Well Comparison analysis is not applicable, BFI shall use the Inter-Well comparison analysis to determine whether water quality protection standards are violated.

Table T-3. Available Initial Concentration Limits for Inorganic Indicator Parameters

	Monitoring Point I.D.										
Constituent	MW-1	MW-2A	MW-7	MW-9	MW-10	Trench	DW-1	DW-2	DW-3	DW-4	MW-2B
Alkalinity	1047	642.3	749.5	1044	622.3	1455	640	760	227.3	377.7	403.1
COD	371.6	98.1	91.92	338.6	134.5	542.2	45	30	420	34	30
Chloride	716	190	208.4	446.6	200.6	605.4	21.9	21.3	26.1	18.77	18.99
Potassium	60.26	16.71	15.61	66.05	21.4	101.7	6.34	8.33	15.77	9.54	8.9
TDS	5,721	4,175	6,921	4,676	5,672	4,181	3,390	2,116	2,295	3,236	3,280
TOC	118.8	26.3	38.49	117.6	39	253.1	22	25	18	28	3.647

7. **Groundwater Quality Monitoring** – BFI shall conduct the following groundwater monitoring activities at the City Side Landfill:

   a. **Quarterly Monitoring:** shall be conducted at monitoring wells MW-1, MW-5, MW-7, MW-9, MW-10, MW-13, DW-1, DW-4, and the groundwater extraction trench on a quarterly basis. Water samples from these monitoring points shall be analyzed for all Indicator Inorganic Parameters on a quarterly basis and all Supplemental Parameters on a semi-annual basis;

   b. **Semi-Annual Monitoring:** shall be conducted at all other groundwater monitoring points[1] (except for standby wells) on a semi-annual basis and water samples shall be analyzed for all Monitoring Parameters; and

   c. **Five-Yearly COC Scan —** Every five years, staring in 2007, BFI shall analyze a sample from each ground water monitoring point for the detectable presence (including trace determinations) of all COCs that are not yet on the Monitoring Parameter list. This constitutes the means by which BFI continues to meet the requirements of 40CFR 258.55(b)-(d).

      i. During each such COC scanning event, the discharger shall obtain and analyze a minimum of one sample from each monitoring well (sufficient to obtain a datum for each COC that is subject to the scan). Upon detecting (including trace value) a COC that is not yet on the MPar list, the discharger shall, within 30 days, take a single resample from the indicating affected well(s) and reanalyze it only for the newly-detected constituent(s).

      ii. Any COC detected in samples collected from a groundwater monitoring well, and verified by a retest, automatically becomes part of the MPar list for the facility. This constitutes the means by which the discharger shall meet the requirements of 40 CFR 258.55(d)(2).

[1] A Detection Monitoring well may be changed to Evaluation Monitoring well as required or approved by the Executive Officer.

8. **Statistical Data Analysis Methodology**

a. Intra-well comparison methods shall be used for all compliance wells for all constituents that are detectable at concentrations above their respective Method Detection Limit (MDL) in 10% or more of the background data to date. Initially, for each given MPar at a given downgradient monitoring well (well/MPar pair), the proposed background data set shall consist of all validated data from that compliance well and parameter, from the period 1995 through 2002. Every two years, following the adoption of this M&RP, as part of the annual monitoring summary report, BFI shall add the newer data to the background data set for each well/MPar pair after validating (via a method approved by the Executive Officer) that the new data does not indicate an increase over the existing background data. At that time, BFI shall also retire the well/MPar's oldest two years of background data, thereby producing a data set covering the then-previous eight years. BFI shall validate the proposed intra-well background data set as follows for each MPar at each well (initially) or, subsequently, at a new well or for a new MPar at an existing well. BFI shall report the validated or updated background data set, for each affected well/MPar pair, in the next scheduled monitoring report.

b. Per 27 CCR section 20415(e)(9)(C), if a control chart approach is used to evaluate water quality monitoring data, the specific type of control chart and its associated statistical parameter values (e.g., the upper control limit) shall be included in the supporting documentation as required by 27 CCR section 20415(e)(7). The discharger shall use the procedure only if this supporting documentation shows the procedure to be protective of human health and the environment. Any control charting procedure must have a false positive rate of no less than 1 percent for each monitoring point charted. For example, upper control limits on X bar or R Charts used only once every six months (where no composite retest is used) must be set at no more than 2.327 standard deviations of the statistic plotted for a one-sided statistical comparison, or at no more than 2.576 standard deviations of the statistic plotted for a two-sided statistical comparison.

c. In the event that an approved data analysis method provides a preliminary indication that a given monitoring parameter has a measurably significant increase at a given well, BFI shall conduct a verification procedure (retest) in accordance with 27 CCR section 20415(e)(8)(E).

d. The verification procedure shall be performed only for the constituent(s) or parameter(s) that has shown "measurably significant" (see 27 CCR § 20164) evidence of a release, and shall be performed only for those monitoring points at which a release is indicated.

e. For any COC or monitoring parameter that is detectable at concentrations above its respective MDL in 10% or less of the background data to date, the constituent' s concentration limit shall be its MDL. A measurable exceedance of this concentration limit shall be determined by application of the non-statistical analysis method described in Section II.B.9 of this M&RP.

f. **Water Quality Monitoring Approach —** Except for COC scans, the monitoring approach used for each monitoring parameter at each compliance well (well/MPar pair) shall be controlled by whether that monitoring parameter has exhibited a measurably significant increase at that well. Therefore, the discharger shall monitor each well/MPar pair in one of two modes, as follows, either:

i. **Detection Mode -** For an MPar that has not produced a measurably significant increase at that well, the purpose of monitoring, for that well/MPar pair, is to watch for the MPar' s

arrival at that well at a concentration strong enough to trigger a measurably significant indication using an appropriate statistical or nonstatistical data analysis method; or

ii. **Tracking Mode -** For an MPar that has produced a measurably significant increase at a given well, the purpose of the monitoring, for that well/MPar pair, is to verify the suitability and effectiveness of the existing or proposed corrective measures by tracking changes in the MPar' s concentration at that location via an evolving concentration-versus-time plot.

g. **Detection Mode Data Analyses -** The following applies to all detection mode data analyses (i.e., this Section does not apply to the scans under Sections II.B.1 or II.B.7.c.):

i. **Monitoring Parameters Readily Detectable in Background —** At any given monitoring point, the discharger shall apply an appropriate statistical analysis for each detection mode monitoring parameter that exceeds its respective MDL in at least 10% of the applicable background data set;

ii. **Monitoring Parameters Not Readily Detectable in Background —** For any monitoring point at which one or more monitoring parameters, in detection mode, exceed their respective MDL in less than 10% of the applicable background data set, the discharger shall analyze the data for these monitoring parameters via the California Nonstatistical Data Analysis Method (CNSDAM) test described in Section A.9 of this M&RP.

9. **California Nonstatistical Data Analysis Method (CNSDAM)**

a. **Non-Statistical Method for Detection Mode for MPars Seldom Found in Background** - For any given compliance (downgradient) well, regardless of the monitoring program (DMP, EMP, AMP, or CAP), BFI shall use this data analysis method, jointly, for all constituents on the "scope list" in Section II.B.9.a.i. of this M&RP (or, for each retest sample, the modified scope list of Section II.B.9.b.ii.

i. **Scope List** – Within 30 days of the effective date of this Order, BFI shall create a current "scope list" showing each detection mode MPar, at that well, that exceeds its MDL in less than 10% of its background data.

ii. **Two Triggers -** From the scope list made under Section II.B.9.a.i. above, for an initial test (or, for a retest, the modified scope list under Section II.B.9.b.ii. below), BFI shall identify each MPar in the current sample from that well that exceeds either its respective MDL or PQL. BFI shall conclude that these exceeding MPars provide a preliminary indication (or, for a retest, provide a measurably significant indication) of a change in the nature or extent of the release, at that well, if ***either***:

(a) Two or more of the MPars on a monitoring well's scope list exceed their respective MDL; or

(b) At least one of the MPars on a monitoring well's scope list equals or exceeds its respective PQL.

b. **Discrete Retest** [27 CCR § 20415(e)(8)(E)]**:**

i. In the event that BFI concludes (pursuant to Section II.B.9.a.ii above) that there is a preliminary indication, then BFI shall immediately notify Regional Board staff by phone, fax, or e-mail and, within 30 days of such indication, shall collect two new (retest) samples from the indicating compliance well.

ii. For any given compliance well, BFI shall analyze the retest samples only for those constituents indicated in that well's original test, under Section II.B.9.a.ii of this M&RP, and these indicated constituents shall comprise the well's "modified scope list." As soon as the retest data are available, BFI shall apply the same test (under Section II.B.9.a.ii above, but using this modified scope list) to separately analyze each of the two suites of retest data at that compliance well.

iii. If either (or both) of the retest samples trips either (or both) of the triggers under Section II.B.9.a.ii, then BFI shall conclude that there is a measurably significant increase at that well for the constituent(s) indicated in the validating retest sample(s). Furthermore, thereafter, BFI shall monitor the indicated constituent(s) in tracking mode at that well, shall remove the constituent(s) from the scope list created for that well, notify the Regional Board in writing, and highlight this conclusion and these changes in the next scheduled monitoring report and in the Landfill's operating record.

10. **Groundwater Flow Direction** – BFI shall measure the water level in each well, at least quarterly, including the times of expected highest and lowest elevations of the water level, and determine the presence of horizontal and vertical gradients, and groundwater flow rate and direction for the respective groundwater body.

11. **Leachate Monitoring** – BFI shall conduct leachate monitoring at leachate well No. LR-2 at City Side Landfill as follows:

a. **Annual Appendix II Constituent Scan -** Leachate samples shall be taken at each monitoring point each year during the month of October. The samples shall be analyzed for all Appendix II Constituents in 40 CFR, part 258.

b. **Retest** - If any constituents that are not in the COC list are detected in the leachate sampling event at any sampling point, BFI shall resample the leachate at that point during the next April and analyze the sample for those detected constituents. If any such constituent is confirmed to be in the leachate, BFI shall add the constituent to the COC list and report this to the Regional Board within two weeks of the confirmation.

c. **Reporting** - Leachate monitoring results shall be included in the semi-annual and annual reports that covers the period during which the monitoring is conducted.

12. **Vadose Zone Monitoring** – Vadose zone monitoring at the City Side Landfill shall include:

a. **Subdrain Monitoring** - As allowed under 27 CCR section 20415(d)(5), subdrain liquid monitoring will be conducted at the subdrains that will be constructed beneath the sediment basin at the City Side Landfill. Subdrains shall be monitored in the same manner as Quarterly Monitoring points.

b. **Landfill Gas Monitoring:** BFI shall include in the semi-annual reports all the monthly gas probe monitoring results conducted in accordance with South Coast Air Quality Management District Rule 1150.1.

13. **Surface Water Monitoring** – BFI shall carry out surface water monitoring at all surface monitoring stations listed in Table T-1 on a semi-annual basis. Surface water samples shall be analyzed for all Inorganic Indicator Parameters and VOCs listed in Table T-2. In addition, BFI shall carry out the monitoring requirements under the General Industrial Stormwater NPDES Permit. All surface water monitoring results shall be included in appropriate semi-annual or annual reports submitted to the Regional Board.

14. **Water Used on Site for Irrigation and Dust Control**: BFI shall record the amount of water used on site for the purposes of irrigation and dust control from each source on a monthly basis. Each water source, other than potable water, shall be sampled quarterly and analyzed for pH, heavy metals, nitrate, and VOCs.

C. SITE INSPECTIONS

The Discharger shall inspect the Landfill in accordance with the following schedule, and record, at a minimum, Standard Observations.

1. During the wet season (October through April), following each storm that produces storm water runoff, or on a monthly basis if no storm produces runoff during the month.

2. During the dry season, a minimum of one inspection shall be performed every three months.

3. **Standard Observations** during a site inspection shall include at least the following:

   a. Evidence of any surface water leaving or entering the Unit, estimated size of affected area, and estimated flow rate (show affected area on map).
   b. Evidence of odors; presence or absence, characterization, source, and distance of travel from source.
   c. Evidence of erosion and/or of exposed refuse.
   d. Inspection of all storm water discharge locations for evidence of non-storm water discharges during dry seasons, and integrity during wet seasons.
   e. Evidence of ponded water at any point on the waste management facility (show affected area on map).
   f. Compliance with the Storm Water Pollution Prevention Plan, insuring that the terms of the General NPDES Stormwater Permit are properly implemented.
   g. Integrity of all drainage systems.

PART III: SAMPLING AND ANALYTICAL PROCEDURES

A. SAMPLING AND ANALYTICAL METHODS

Sample collection, storage, and analysis shall be performed according to the most recent version of Standard USEPA Methods (USEPA publication "SW-846"), and in accordance with a sampling and analysis plan acceptable to the Executive Officer. A State of California approved laboratory shall perform water analysis. Specific methods of analysis must be identified. The director of the laboratory whose name appears on the certification shall supervise all analytical work in his/her laboratory and shall sign reports of such work submitted to the Board. In addition, BFI is responsible

for seeing that the laboratory analysis of samples from all Monitoring Points meets the following restrictions:

1. The methods of analysis and the detection limits used must be appropriate for the expected concentrations. For detection monitoring of any constituent or parameter that is found in concentrations which produce more than 90% non-numerical determinations (i.e., Trace) in historical data for that medium, the SW-846 analytical method having the lowest Method Detection Limit (MDL) shall be selected.

2. Trace results (results falling between the MDL and the Practical Quantitation Limit (PQL)) for organic compounds shall be reported as such.

3. MDL and PQL shall be derived by the laboratory for each analytical procedure, according to State of California laboratory accreditation procedures. Both limits shall reflect the detection and quantitation capabilities of the specific analytical procedure and equipment used by the laboratory. If the laboratory suspects that, due to a change in matrix or other effects, the true detection limit or quantitation limit for a particular analytical run differs significantly from the laboratory-derived values, the results shall be flagged accordingly, and an estimate of the limit actually achieved shall be included.

4. For each MPar addressed during a given reporting period, BFI shall include in the monitoring report a listing of the prevailing MDL and PQL for that MPar, together with an indication as to whether the MDL, PQL, or both have changed since the prior reporting period. BFI shall require the analytical laboratory to report censored data (trace level and non-detect determinations). In the event that an MPar's MDL and/or PQL change, BFI shall highlight that change in the report's summary and the report shall include an explanation for the change that is written and signed by the owner/director of the analytical laboratory.

5. Quality assurance and quality control (QA/QC) data shall be reported along with the sample results to which it applies. Sample results shall be reported unadjusted for blank results or spike recovery. The QA/QC data submittal shall include:

    a. The method, equipment, and analytical detection limits.
    b. The recovery rates, including an explanation for any recovery rate that is outside the USEPA-specified recovery rate.
    c. The results of equipment and method blanks.
    d. The results of spiked and surrogate samples.
    e. The frequency of quality control analysis.
    f. The name and qualifications of the person(s) performing the analyses.

6. QA/QC analytical results involving detection of common laboratory contaminants in any sample shall be reported and flagged for easy reference.

7. Non-targeted chromatographic peaks shall be identified, quantified, and reported to a reasonable extent. When significant unknown peaks are encountered, second column or second method confirmation procedures shall be performed in an attempt to identify and more accurately quantify the unknown analyte(s).

B. RECORDS TO BE MAINTAINED

Analytical records shall be maintained by the Discharger or laboratory, and shall be retained for a minimum of five years. The period of retention shall be extended during the course of any unresolved litigation or when directed by the Executive Officer. Such records shall show the following for each sample:

1. Identity of sample and the actual Monitoring Point designation from which it was taken, along with the identity of the individual who obtained the sample.

2. Date and time of sampling.

3. Date and time that analyses were started and completed, and the name of personnel performing each analysis.

4. Complete procedure used, including method of preserving the sample, and the identity and volumes of reagents used.

5. Results of analyses, and Method Detection Limit and Practical Quantitation Limit for each analysis.

ORDERED BY: _____ DATE: October 17, 2003
Dennis A. Dickerson
Executive Officer

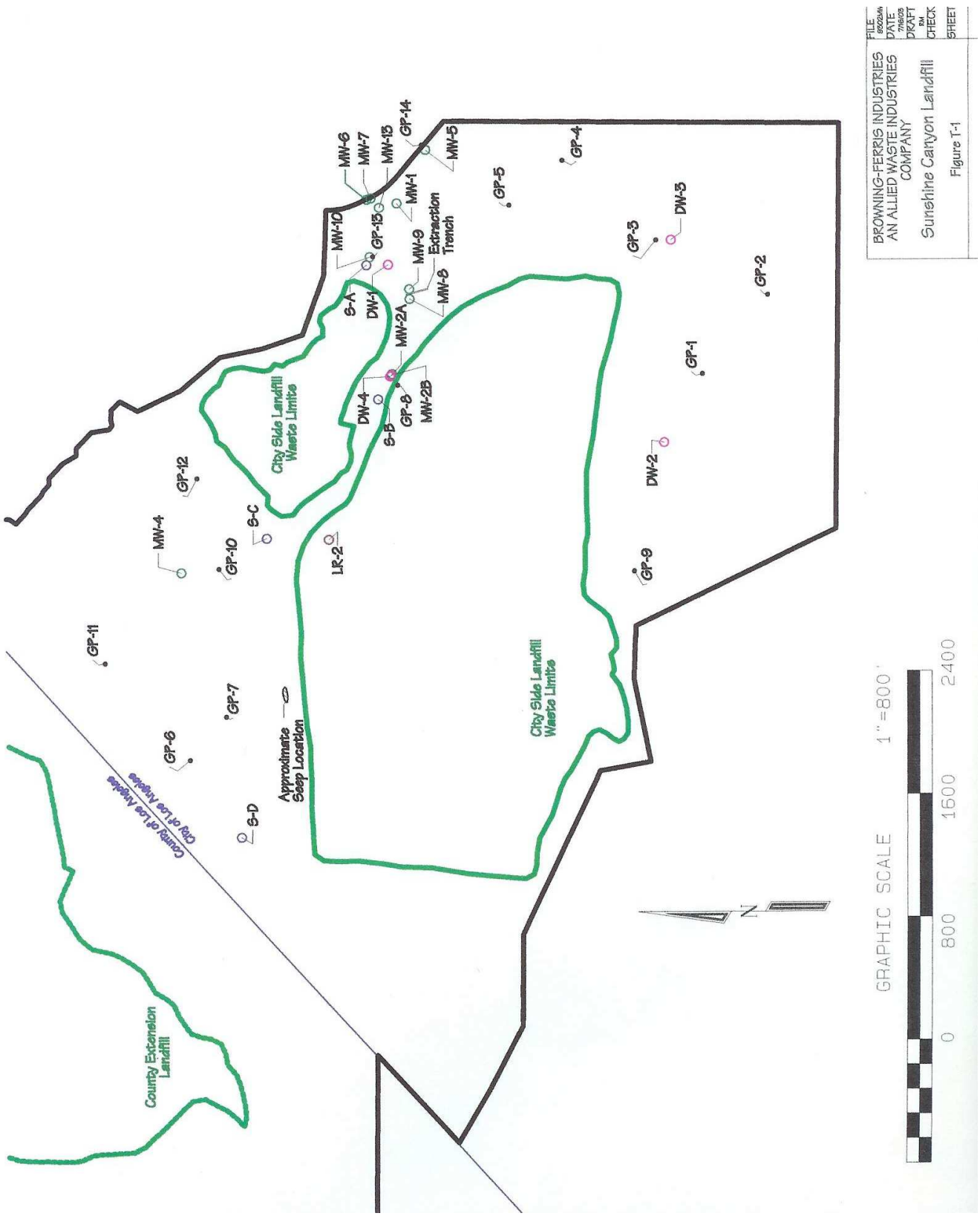
BROWNING-FERRIS INDUSTRIES
AN ALLIED WASTE INDUSTRIES COMPANY
Sunshine Canyon Landfill
Figure T-1
FILE
DATE
DRAFT
CHECK
SHEET
MW-6
MW-7
MW-13
GP-14
MW-5
GP-4
MW-1
GP-5
DW-3
MW-10
GP-15
Extraction Trench
MW-9
MW-8
GP-3
GP-2
S-A
DW-1
MW-2A
GP-1
City Side Landfill Waste Limits
DW-4
S-B
GP-8
MW-2B
DW-2
GP-12
S-C
MW-4
GP-10
LR-2
GP-9
GP-11
GP-7
GP-6
Approximate Seep Location
City Side Landfill Waste Limits
County of Los Angeles
City of Los Angeles
S-D
County Extension Landfill
N
GRAPHIC SCALE
1" = 800'
0
800
1600
2400

Figure T-1